



The Effectiveness of Lymphotropic Therapy in the Treatment of Purulent-Inflammatory Diseases of the Hand on an Outpatient Basis

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Abstract: Relevance of the topic: According to the World Health Organization, in the outpatient practice of a surgeon, purulent-inflammatory diseases of soft tissues account for about 70% [2; 10; 12]. Of these, up to 46% of cases are purulent diseases of the hand, in particular various types of panaritium [4]. The frequency of occurrence of purulent diseases of the fingers and hands in recent years tends to increase and the observed complications increase [5; 6].

Everyone knows that in the treatment of purulent-inflammatory diseases, various traditional methods of using antibiotics are often used: enteral and parenteral (oral, intramuscular, intravenous, etc.). However, targeted delivery-pathogenetically justified administration of an antibiotic into the lymphatic system is used quite rarely [1; 3; 8; 10; 11].

It is known that lymphatic therapy has a number of advantages: rehabilitation of the lymphatic system and more intensive restoration of its immunological and protective functions; accumulation and deposition of an antibiotic in regional lymph nodes; stimulation of the immune response; reduction in the number of side effects of antibacterial therapy [7; 9; 10; 11].

Based on the above, to date, the justified use of "targeted" - lymphotropic administration of antibacterial drugs for purulent-inflammatory diseases of the hand in outpatient settings is very relevant.

The purpose of the study. To improve the effectiveness of treatment of patients with purulent-inflammatory diseases of the hand, in particular panaritium, using in the complex of treatment of lymphotropic antibiotic therapy in outpatient settings.

Materials and methods

On outpatient treatment there were 91 patients with various forms of panaritium (cutaneous, subcutaneous, periarticular, subarticular and paronychia). These patients were treated in the conditions of the family polyclinic No. 9 at the Bukhara City Medical Association, in the period from 2016 to 2022. The age of the patients ranged from 18 to 65 years. Patients with complex forms of panaritium: bone, tendon, articular and pandactyl were hospitalized due to the difficulty of treatment in outpatient

conditions. All patients were divided into two groups – the main group (n=47) and the control group (n=44). In both groups, patients were additionally distributed according to nosological forms of panaritium (Table 1). Table No. 1.

Distribution of patients by nosological forms of panaritium

Types of panaritia	Groups					
	Main		Control		Total	
	Abs.	%	Abs	%	Abs	%
Cutaneous panaritium	13	27,7	11	25,0	24	26,4
Subcutaneous panaritium	12	25,5	13	29,5	25	27,5
Periarticular panaritium	8	17,0	9	20,5	17	18,7
Podnogtevy panaritium	9	19,2	7	15,9	16	17,6
Paronychia	5	10,6	4	9,1	9	9,8
Total:	47	100	44	100	91	100

Among all patients, the main numbers sought medical help in the first 5 days from the onset of the disease – 41 (45.1%). 34 (37.4%) patients had referrals in the period from 5 to 7 days. 16 (17.5%) patients were self-medicating and did not seek medical help for more than 7 days.

The cause of the above-listed purulent diseases of the hand in 65 (71.4%) cases was microtrauma. These injuries were in the form of abrasions, scratches, skin cracks, superficial incised wounds, foreign bodies, burrs.

All patients of both groups used the same research methods. The components of the study were: examination, probe palpation of the affected finger, radiography, diaphanoscopy, body temperature measurement.

The clinical and laboratory study consisted of a clinical minimum (a general blood test, a general urine test). During the study, patients were conducted: instrumental palpation of the lesion site with a button probe, diaphanoscopy, X-ray, bacteriological examination and cytological examination of smear prints from the wound.

The bacteriological study included the primary sowing of clinical material on basic and elective (selective) nutrient media to isolate a pure culture of the pathogen, and to determine its titer in the pathological material (the number of bacteria in 1 ml).

The primary sampling of the material was performed before the start of antibiotic therapy in the preoperative period or intraoperatively, which made it possible to adequately select antibiotic therapy before the start of treatment. The sensitivity of the isolated pathogen to antimicrobial drugs was determined by the disco-diffusion method, which made it possible to choose a specific pathogen from a wider range of antibiotics for treatment.

All patients of the main group (n=47) underwent surgery for urgent indications under local infiltration anesthesia. These patients received lymphotropic therapy after surgery, sometimes before surgery. The essence of lymphotropic therapy was as follows: in the first interdigital space to a depth of 1.0-1.5 centimeters (into the cellular space of the palm), a needle (length 3-4 cm, lumen diameter 1 mm) was inserted into the subcutaneous tissue from the back of the affected hand. We made sure that only the skin was pierced. At the same time, no blood was released from the needle. After that, 16-32 units of lidase dissolved in 2 ml of 0.5% novocaine solution were injected through this needle. Without removing the needle after 3-4 minutes, 0.5g of cefazolin diluted in 2.0 ml of 0.25% novocaine solution was injected. An alcohol balloon and a dry aseptic dressing were applied to the injection site. Such

lymphotropic therapy was continued once a day for 3-4 days. The rest of the antibiotic was administered intramuscularly.

In patients of the control group (n=44), postoperative treatment was carried out by the traditional method, which included local treatment - daily toilet of the wound with antiseptic solutions (3% hydrogen peroxide solution, 1% boric acid solution), applying a bandage with Levomekol ointment. Drug treatment consisted of the use of cephalosporin antibiotics in medium therapeutic doses. These antibiotics are administered intramuscularly for 5-7 days. Additionally, analgesics, general restorative drugs and physiotherapy procedures are prescribed.

Results and discussion

All patients in the first two days after the operation complained of pain in the wound area, increasing with movement. Locally determined: local edema, infiltration of surrounding tissues, purulent discharge from the wound, the walls of which were covered with fibrinous-purulent deposits.

The general condition and well-being of the patients of the main group significantly improved on 3-4 days of treatment. The temperature returned to normal, the wound was cleared of pus, granulation tissue appeared, local signs of inflammation regressed. All these signs of improvement were observed in patients of the control group for 5-6 days.

The effect of treatment was determined by the disappearance of the pain syndrome, the cleansing of the wound from pus, the appearance of granulations. The average time of wound cleansing from purulent-necrotic masses in the main group of patients was 3.2 ± 1.3 days, and in the control group 4.1 ± 1.4 days.

In purulent foci, *Staphylococcus aureus* was sown in 71 ($78.02 \pm 1.71\%$) cases. *St. epidermidis* was found in 13 ($14.28 \pm 1.31\%$) observations. *Streptococcus pyogenes* was seeded in 3 ($3.29 \pm 0.85\%$) patients. *E. coli* was detected in 1 (1.1%) case, and in 3 ($3.29 \pm 0.71\%$) cases, microflora growth was absent in the studied material.

The results of the study indicate the predominant role of *staphylococcus* as the main causative agent of purulent skin diseases, including the brush.

Conclusion. Lymphotropic administration of an antibacterial drug makes it possible to increase the duration of its therapeutic concentration directly in the focus of inflammation, since lymphocytes maturing in the lymph nodes are able to adsorb the active substance on their surface and deliver it to the zone of lymphocytic infiltration of the inflammatory focus. Against this background, lymphotropic therapy in the complex treatment of paronychia in the postoperative period makes it possible to perform effective rehabilitation of the focus of inflammation. At the same time, controlled postoperative treatment is carried out, the duration of treatment is reduced and an economic effect is provided for a socially significant and frequent disease such as paronychia. This method allows to reduce the need for medicines by 2 times in comparison with traditional methods of their administration. When using lymphotropic therapy, the unproductive labor costs of medical personnel are significantly reduced.

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